

Satellite Networks and Architectures Branch (RCN)

Conducts research and development of advanced aerospace communications network architectures, protocols, standards, technologies and network-based applications. Major research endeavors include: 1) simulation and modeling of next generation network architectures protocols and topologies for aeronautics and space-based platforms and environments 2) research into Internet-based protocols, standards, and algorithms to mitigate effects of high delay-bandwidth products, dynamic path delays and variable signals delays, 3) development of advanced testbeds to benchmark and evaluate Internet-based protocols, standards and technologies for application to NASA missions, 4) participation in standards making bodies and forums to recommend modifications to terrestrial-based network-based protocols and technologies to enhance interoperability, and 5) design and implementation of advanced hybrid architectures to support NASA applications. Some specific areas of interest are transmission control protocols, modifications, and enhancements to mitigate variable delays and high latency, next generation transport protocols(s), mobile-internet protocols/routing, ad-hoc networking, and quality-of-service protocols

